

## ABSTRACT:

This invention includes apparatus and methods for merging of overlapping two-dimensional (2D) images which are formed by a image pick-up device as projections of a three-dimensional (3D) scene. In particular, the merging includes image registration by projective transformation of one of the 2D images, the transformation being derived from  
5 corresponding feature found in both images. In order to achieve improved accuracy and stability, the coordinates of the corresponding feature points are chosen or are translated so that, on average, the numerical ranges of coordinate values are minimized. Apparatus of the invention includes an appropriately configured image processor or computer with an attached image acquisition device, which in one embodiment, is a diagnostic x-ray apparatus.

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Figure 2